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The Cooper

By WILLIAM B. SPRAGUE

[The capital letters interspersed through the text refer to the list of authorities at the end of the article. It should especially be noted that the letter M, with numeral, in heavy type, indicates that the tool in question is illustrated in *Ancient Carpenter's Tools*, by Henry C. Mercer, on the page bearing the corresponding number. It is greatly regretted that the cost of reproducing these cuts here would be prohibitive, but it is assumed that anyone who is seriously interested in the subject of this article already has, or will wish to acquire, a copy of Dr. Mercer's book, and be able to readily refer to the illustrations as necessary. It can be purchased from the Bucks County Historical Society, Doylestown, Pa. — AUTH.]

The barrel, like the wheel, is one of the outstanding basic inventions of mankind. The idea "is ascribed by Pliny to the people who lived at the foot of the Alps (the Piedmontese). It seems to have attained great excellence at an early date." (E,F). Certainly cooperage was a well established trade in England long prior to the landing of the Pilgrims in America, for, at the time the Mayflower sailed, the law required that a cooper be aboard,—probably to repair any damage to the water casks (F)—and John Alden was hired for that purpose at the last minute (see THE CHRONICLE Vol. I, No. 19).

Probably very few of our readers have ever paused to realize that, when analyzed, the homely barrel is an extremely complicated structure. "Since a cask is a double conoid, usually having its greatest diameter (technically the *bulge* or *belly*) at the center, each stave must be properly curved to form a segment of the whole, and must be so cut as to have a suitable *bilge* or increase of width from the ends to the middle; it must also have its edges beveled to such an angle that it will form tight joints with its neighbors" (A). In addition to this, the heads must be formed and proper provision made for fixing them in place. When it is remembered that, in the early days, all this had to be done with crude, hand-made tools, principally

HOOPING THE BARREL
(From Rivington's *Trades*)

"by eye", and that, generally speaking, *the finished product was useless if it would not hold liquid without the slightest leak*, it is surprising that competent coopers were taken as a matter of course, and almost incredible that barrel-making was practiced at home in New England as "pick-up work" (B, C.). Tangible evidence of this fact, however, consists of a crude and obviously home-made barrel in the possession of the writer, which was found in a New England attic, and which was far too large to go through any of the doors or windows, proving that it must at least have been "set up" on the spot. Although one of the

(*Continued on page 35, column 1*)

The Bath Tub Hoax

By JOSEPH E. SANDFORD

[Mr. H. L. Mencken, to whom I submitted the following article for his comments, has written me as follows: "So far as I am concerned you are certainly quite free to print the enclosed. I have read it with great interest and amusement." — AUTH.]

On Friday, December 28, 1917, there appeared in the *New York Evening Mail* an article by H. L. Mencken —"*A Neglected Anniversary.*" It purported to give the history of the bath tub in the United States. This account found its way into serious periodicals, the transactions of learned societies, was alluded to in Congress and even crept into standard works of reference. It was a hoax.

On May 23, 1926, "having undergone a spiritual rebirth and put off Sin"—Mr. Mencken confessed and appealed to the pedagogues and historians to stop spreading the balderdash he had fathered. This appeal was printed simultaneously in the newspapers of thirty large cities, but the well-wrought fabrication remained alive. The *Boston Herald* intimated that the *confession* was a hoax, and on the June thirteenth following reprinted the "ten-year-old-fake" — promoting it to the first page of the Editorial Section—"Soberly as a piece of news." The confession was included in Mr. Mencken's book *Prejudices: Sixth Series*, published in 1927, from which a condensed version *"Hymn to Truth"* was printed in the *Readers' Digest*, October, 1937.

So that Mr. Mencken's "preposterous facts" may be recognized when they are met, a list of them made from the *Evening Mail* article of December 28, 1917 is here given: (1) On authority of a surgeon of the Public Health Department, Washington, D.C., (2) Adam Thompson, Cincinnati, O. (3) dealer in cotton and grain, (4) learned of the bath tub on a trip to England (5) Lord John Russell in-

troduced the bath tub in England (6) and took daily baths in 1835. (7) Adam Thompson invented a ham and bacon bagging machine. (8) Adam Thompson built the first modern bathroom, in his Cincinnati home, near the present corner of Monastary and Oregon Streets. (9) The water for it was drawn from a garden well, with a hand-pumper worked by six negroes, (10) to a cypress tank in the garret. (11) A hot water pipe was coiled in the kitchen chimney. (12) This tub was made by James Gui..ness [type battered], a leading Cincinnati cabinet maker, (13) of Nicaragua mahogany. (14) It was nearly seven feet long, quite four feet wide, lined with sheet lead, and soldered. (15) It weighed about 1750 lbs. (16) The floor was reinforced to support it. (17) Its exterior was made of polished wood. (18) On Dec. 20, 1842, Adam Thompson took a cold bath in the morning and a warm bath in the afternoon. (19) The water was heated to a temperature of 105 degrees. (20) A party of gentlemen dined at Adam Thompson's house on Christmas Day, 1842. The tub was shown and its use demonstrated. (21) Four of the party, including a French visitor, Col. Duchanel, tried the bath tub. (22) Next day "all the Cincinnati newspapers" described it and opened their columns to a violent discussion of it. (23) The *Western Medical Repository* of April 23, 1843, said that bathing in a bathtub invited phthisis, rheumatic fevers, inflammation of lungs and the whole category of zymotic diseases. (24) In 1843, the Philadelphia Common Council came within two votes of passing an ordinance prohibiting bathing between November first and March fifteenth. (25) In the same year Virginia taxed each bath tub $30 a year. (26) In Hartford, Providence, Charleston, and Wilmington, Del., heavy water rates were levied on bath tubs. (27) In 1845, Boston made bathing unlawful except upon medical advice. The ordinance was not enforced and was repealed in 1862. (28) In 1845, a bath tub cost $500 in New York City. (29) A common pine bath tub, zinc lined, was invented by John F. Simpson, a Brooklyn plumber, in 1847. (30) After 1848, New York plumbers were equipped for bath tub installations. (31) The *Christian Register*, of July 17, 1857, said that the first New York bath tub was installed on Sept. 12, 1847 and that by 1850, there were nearly 1,000 in New York City. (32) The American Medical Association held its 1849 annual meeting in Boston; 55 per cent of the members voted the use of the bath tub harmless. (33) At the American Medical Association meeting in 1850, the use of the bath-tub was approved. (34) Homeopaths approved it in 1850. (35) In March, 1850, Millard Fillmore visited Cincinnati and tried Thompson's bath tub (Thompson was then dead) —this according to Fillmore's biographer, Chamberlain. (36) President Fillmore directed the Secretary of War, General Charles M. Conrad to get bids for the first White House bath tub. (37) Bennett, the elder, of the *New York Herald* accused Fillmore of wanting to get the alabaster and porphyry bath tubs of Louis Phillippe from Versailles. (38) Harper and Gillespie — "a firm of Philadelphia engineers" installed the first White House bath tub early in 1851. (39) It was made of thin cast iron (40) and remained in the White House until Cleveland's first administration. (41) By 1860, newspaper advertisements showed that all New York hotels had bath tubs. (42) In 1862, General MacClellan introduced the use of the bath tub in the army. (43) In 1870, the first prison bath tub was placed in Moyamensiny Prison at Philadelphia.

There may be those who, like the *Boston Herald*, regard Mr. Mencken's *Confession* as the hoax. They may be interested in the following. Neither Adam Thompson nor cabinet maker "James Gui..ness" appear in D. H. Schafer's *The Cincinnati, Covington, Newport and Fulton Directory* for 1840, nor in Cist's *Cincinnati Directory* for 1843. A search of the Cincinnati *Gazette*, from December 20, 1842 to the end of the year, shows no bath tub inauguration nor bath tub controversy. The *Western Medical Repository* does not appear in the great *Union List of Serials* (New York, 1927). The American Medical Association held its second annual meeting at Boston in 1849, but N. S. Davis' *History of the American Medical Association* has no word of bath tubs in the account of that meeting. There is nothing to show that Millard Fillmore ever had a biographer by the name of Chamberlain. A. McElroy's *Philadelphia Directory* for 1850, lists no firm of Harper and Gillespie, and neither a Harper nor a Gillespie is listed as an engineer or iron founder.

There seems to be no evidence that the American public of the early nineteenth century thought bathing unhealthy, but quite the contrary. Gordon's *Gazetteer of New York* (1836) says that at Holtz Hotel — "A steam engine is employed to raise the provisions from the kitchens and water for the baths." And the *Boston Almanac* for 1841 lists ten public baths in that city, three of which were in hotels. Even the *Cincinnati Directory* for 1840 lists "The Arcade Bathhouse," which in 1843, advertised in Cist's *Cincinnati Directory* — "Spare Bathing tubs, for the accommodation of Invalids, sent to any part of the city." Mr. Mencken told the truth when he confessed.

As time goes on, Adam Thompson's bath tub will probably continue to flood us with misinformation, and new designs will appear on its polished mahogany sides. Already an anonymous Prime Minister has taken Lord John Russell's place in one account (Lord John was Prime Minister of England, but not until 1846). Thompson has become a "cattle and grain merchant" —the Christmas party has been set back to December 20th and the Boston repeal is dated 1852 instead of 1862, which demonstrates the difficulty of keeping the record straight — even a hoax.

An implement not infrequently met with is a slab of wood, eighteen or twenty inches long and six or seven inches wide, with one surface smooth and the other whittled into a series of deep corrugations running across its width, and usually provided with a whittled handle in prolongation of its long dimension. All thus far consulted agree that it was probably a laundry tool. Some say it is merely a washboard, although it would seem too narrow to be efficiently used in that way. Others believe that it was for "beating" the clothes, and information comes indirectly from a Russian gentleman that he had *seen* it in use, the wet clothes being rolled up tightly and then smoothed by rubbing the corrugations of the instrument over the surface of the roll. One rare example, which is provided with a handle, similar in shape to that of a flat iron, pegged to its smooth surface, apparently could have been used more conveniently for the latter purpose than for the others. Who can settle this moot point?

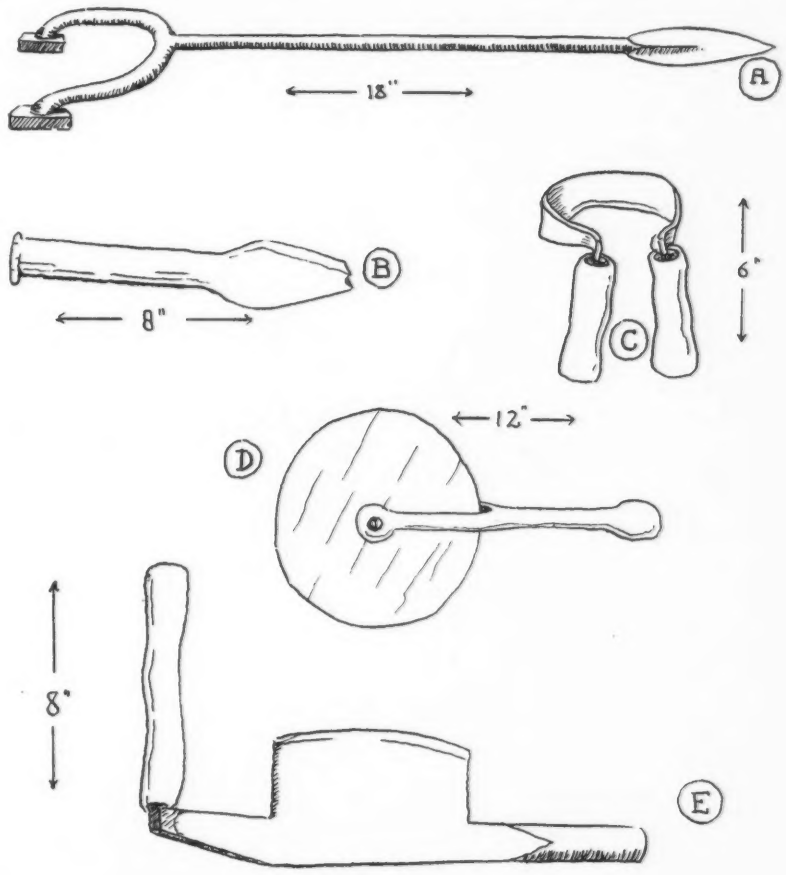
The Cooper

(*Continued from page 33, column 2*)

heads was missing, it was equipped with a bung-hole, and hence was originally intended to hold liquid of some kind. Anticipating possible curiosity on the part of the reader, it may be mentioned that the barrel was taken out of the attic by removing three or four staves at two points opposite each other and then putting it through the window, as one passes the legs of a large table around the edge of a narrow doorway.

In making the staves, the timber,—usually oak or cedar (D), but sometimes deal or beech (F)—"is first cut to the proper length with the kind of saw used in the cities (*sic*) for cutting fire-wood" (D). For *pipes*, the length was five feet, six inches; for *hogsheads*, four feet; for *barrels*, three feet, six inches, and so on (G). "It is next split into pieces with a *frow*, the curvature of which corresponds, at least with some degree of exactness, to that of the proposed vessel" (D). Another name for the frow was *riving knife* (E). The curved frow is not referred to or shown by Dr. Mercer, but his illustration of the ordinary straight frow for splitting shingles and clapboards (**M13**), as well as his description of its use, will answer all purposes, if it is remembered that, as stated above, the blade of the stave frow is curved along its long dimension. "The worker, holding the handle vertically in the left hand, sets the heavy wide-backed blade of the instrument on the top of the block placed vertically in the tree-fork 'frow horse'. **** He then strikes the back of the blade, beyond its projecting end, continued blows with the club, while he wriggles the handle, if necessary, to hurry the split, or regulate the depth of the cut, until a segment of the block **** flies off." (see also *The Frow—a Useful Tool*, by Stephen A. Wolcott, The Chronicle, Vol. I, No. 6). The curved frow is so seldom met with that it is possible, in spite of the above well-authenticated statement, that the majority of coopers split their staves with a straight frow, and relied entirely on the draw knives to produce the necessary curve, as hereafter explained.

It is probable that some rough hewing was done on the staves with the cooper's specialized *adz* (F, **M98**) and *hewing hatchet* (**M87**), but to perfect them, they were "shaved on the edges with a straight *drawing knife*, on the inside with one of a concave form, and on the outside with one of the corresponding convexity." (D, **M100**). In using the draw knife, the piece to be worked upon was usually clamped in the *shaving horse* (**M16**). *Spokeshaves* were also sometimes used for this purpose (F, I, **M104**). To produce the proper bevel along the edges, "they are jointed on a long plane, which is placed with its face upwards, in an inclined position (**M108**, **109**). The workman is guided in giving the proper angle to the surface cut with the plane by a wooden gauge of peculiar form" (D), which latter the writer has never seen and has no means of describing. It should be borne in mind that, in using this plane, the tool is held stationary and the wood pushed against the blade. Examples of the *long jointer plane* have been seen, with two blades, but these are so placed that they could not possibly have functioned at the same time, and the purpose of the arrangement is not readily apparent. When the staves were too long to be handled in this fashion, they were jointed by means of the *short jointer* or *pull plane*, worked by two men (**M120**).



Cooper's Tools
Not illustrated in Dr. Mercer's *Ancient Carpenter's Tools*.
(A) Flagging Iron. (B) Drift. (C) Scorper. (D) Traveller. (E) Chamfer Knife.

Some times the staves, as well as other parts of the barrel, were marked or *scribed* with a *race knife* (**M51**) to indicate their proposed position. Another tool for which the cooper undoubtedly had frequent use were *callipers* (**M228**).

"The staves being prepared, the next step is to set up or *raise* the barrel. For this purpose, as many staves as are necessary are arranged upright in a circular frame, and round their lower halves are fitted *truss hoops* which serve to keep them together for permanent hooping" (A, D). The truss hoop resembles an ordinary barrel hoop except that, for extra strength,

it is square in cross-section, and bound at intervals with iron. "The upper ends are then drawn together by means of a rope which is passed round them and tightened by a windlass, and other truss hoops are dropped over them, the wood being steamed or heated to enable it to bend freely to shape" (A, I). "The fire for this purpose is made of shavings or chips in a small furnace of sheet iron, called a *crusset*" (D), or in a *cresset*, defined as "an iron basket or cage to hold fire, char the inside of a cask, and make the staves flexible" (E), or as "a heavy piece of stove-pipe, eight inches in diameter and thirty inches long" (I). The cressets seen by the writer consist of three or four wrought iron hoops, held in a horizontal position at equal intervals by three wrought iron uprights, the whole structure being about eighteen inches high and about ten inches in diameter. The small diameter of the cresset prevented the barrel from catching fire (I).

After the staves had been bent into their proper positions, one or two of the permanent hoops were put on (D). "The outside is then made smooth with a convex drawing knife, and the inside with a smoothing plane, the edge of which is circular to correspond with the form of the surface. The inside of small wooden vessels is generally made with a crooked drawing knife" (D). The term "crooked drawing knife" undoubtedly refers to the two-handled *scorper* (Fig. C). The blade of this tool is almost always sharpened on the bottom edge, as here shown, but one rare example has been found with the upper edge sharpened, so that, to use it, it would have to be pushed, instead of pulled. The *round shave* was also used for the same purpose (**M101**) as well as the spoke shave (I). The statement that "the staves are now *sawn* off to a uniform length" (D) is surprising in that one would suppose that, at this stage, they would be so nearly of an equal length as to eliminate the necessity of a saw. However that may be, it is certain that their ends were eventually planed off evenly with the curved *sun plane* (**M114**) or *leveller* (I).

"The two ends of the cask are next finished to receive the heads by forming the *chine*, or bevel on the extremity of the staves" (A). This was done with the *howel* (E, **M114**), a peculiar type of plane, or with the *chamfer knife* (Fig. E), or possibly sometimes by the successive use of both tools. The chamfer knife was, of course, operated with the straight handle inside the barrel and the bent handle above it. The groove in which the head was fixed was called the *croze*, and somewhat confusingly, the tool which cut it bore the same name (**M128**).

The heads were usually composed of two or more pieces, cut to shape with a *bow saw* (I, **M150**), the thin blade of which would readily saw the curves, which were marked on the wood with a *compass* (**M62**) and "chamfered or bevelled around the edge to fit into the croze groove" (A) with a "straight drawing knife" (D). The vise which held the wood during these operations was of a highly specialized type (I). These pieces "having been slightly fastened together with wooden pins, the whole, as one piece, is inserted in its proper place, by driving it down from the top on the inside" (D).

Cooper's Shop
(From Griffin's *Trades*)

The hoops "are made of thin strips of iron, or of small oak, hickory, ash or cedar saplings" (D), or hazel (F). Iron hoops were not favored for small, thin-staved vessels, which might be seriously injured by their rust or the contents disagreeably flavored thereby (G). Iron hoops were sometimes "battered and flared out to fit the bulge of a cask with a *flue hammer*, described as "a hammer with a narrow peen, whose length is in the plane of the motion of the hammer" (E), but otherwise unknown to the writer. Wooden hoops were usually made by notching both ends of the piece to be used and hooking one notch into the other. To ascertain how long to cut the piece for the hoop, whether of wood or iron, an ingenious instrument known as a *traveller* was sometimes employed. This consisted of a wheel of wood or iron, of which the exact circumference was known to the operator, mounted on a handle (Fig. D). This was placed against the side of the barrel, the starting point being marked both on the barrel and on the wheel, and then rolled around the surface of the barrel, the number of revolutions being counted, and any additional distance, less than a full revolution, being measured. The same operation was then applied to the material for the hoop. It would seem as if it would have been much simpler to ascertain the circumference of the barrel by passing a tape, or even a string, around it, and then stretching the latter along the piece to be cut. Of course, this would not be very practicable, if it were the inside circumference which was to be measured.

All hoops bore various technical names, according to the position which they were to occupy on the barrel (E). To drive a hoop into place, the workman rested the groove of the *drift* (F, Fig. B) against the upper edge of the hoop, and pounded the other end of the drift with the poll of his adz. "To make the hoops stick, he takes the precaution to chalk the staves before he begins this part of the operation" (F). Drifts were made either of wood or of iron and were selected for use to correspond with the material of the hoop which was to be driven (F). When, for any reason, it was necessary to remove a tight hoop from a barrel, it was done with a *lever-hook* (**M39**, **109**), similar in construction and mode of operation to an ordinary cant-hook. In the excellent collection of cooper's tools at the Mariner's Museum, Newport News, Va., this instrument is labelled *chien* (French for "dog".) There is probably some connection between this name and the fact that the iron part of the tool resembles to some extent, the lumberman's *dog* (**M78**), with which he binds two logs together by spiking one end of it into each of them. If the barrel was to hold liquid, the bung-hole was bored with the *taper auger* or *tap auger* (E, **M191**).

This completed the barrel, except that "the cooper sometimes places between each staves (*sic*) from top to bottom, split flags, which swell with moisture, and effectually prevent the vessel from leaking; but this is more commonly done in repairing old casks; if the work is properly conducted there is no necessity for the use of flags" (F). The *flagging iron* (Fig. A) was sometimes called a "devil's talon". The Mariners' Museum displays an ingenious device, not seen elsewhere, for ascertaining whether a barrel is air-tight. This consists of two discs of wood, about ten inches in diameter, joined together by a cylinder

(*Continued on page 38, column 1*)

Early American Industries Association

Early American Industries Association

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Communications should be addressed as follows: Pertaining to the *contents* of The Chronicle, to W. B. Sprague. Applications for membership, to S. E. Gage. Suggestions of prospective members, to Howard G. Hubbard. Other matters to Burton A. Kollmer. Addresses as above.

W. B. Sprague, *Editor.*

Our Purpose

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

Dues

The annual dues are payable September 1st, and are as follows: Regular members $1.00; Contributing members, $2.00; Supporting members, $5.00; Sustaining members, $10.00, and up. There is no distinction between the classes, except the amount of the dues, but the publication of The Chronicle cannot be financed unless a considerable number of the members pay more than $1.00. Each member is expected to voluntarily place himself in the class which represents the amount he is willing to contribute to the support of the Association for the current year. The Chronicle is sent to all members without additional charge. Many of the back numbers may be secured from the Treasurer for 20c each, and a twelve-page index to the twenty-four numbers of Volume I, containing a useful bibliography, for $1.00 each. For further information, address any of the officers.

Index and Binding of Volume I

The index to Volume I of The Chronicle, consisting of the first twenty-four numbers, is being printed and will soon be mailed to all those who have subscribed for it. A description of it appears on page 29 of the last issue. The Secretary has a reserve supply of copies on hand, which will be mailed to those who apply for them and remit the current price of $1.00 each. It is quite probable that the price will be increased as the supply decreases.

Arrangements have been made with Lafayette Bookbinding Co., 151 Lafayette Street, New York, N. Y., for members to have their files of Volume I bound at a cost of $2.75 each, returned postpaid, provided orders are received reasonably promptly. The binding will be of dark green buckram, with appropriate titles stamped in gilt on the back and face of the cover. If you desire to avail yourself of this arrangement, you should forward your twenty-four copies and index, prepaid and safely packed against creasing or tearing, to the bookbinder, with the enclosed printed order, legibly filled out with your name and address, and your remittance. *Be sure to check over your file carefully to see that it is complete and do not include the first five numbers of Volume II.*

The collection of tools formed by the late Stephen A. Wolcott, one of the founders of the Association and its first Secretary and Treasurer, has been presented by Mrs. Wolcott to Colonial Williamsburg. A careful selection has been made to show a "cross-section" of the collection and these tools have been attractively arranged in groups at the Craft House. Various "shops," cabinet maker's, blacksmith's and pewterer's, have been opened and are in operation at Williamsburg, to demonstrate the early methods of carrying on these trades, and others are in prospect. The present plan is to exhibit the bulk of the Wolcott tools in these appropriate settings.

Mr. Thomas E. Barns, Milford, Mass., has an iron mortar, apparently of early date, plainly marked "W. B. & Co. No. 4", and would appreciate any information about it.

Mould--for What?

The article here illustrated is owned by a resident of North Colebrook, Connecticut, and presumably was found in that general locality. There is a sharp difference of opinion, among those who have seen the photograph from which the cut was made, as to the material which it was designed to mold. One authority suggests that it was cheese, but, if so, it is the first cheese mold to come to our attention. The firmer varieties of cheese were usually formed in a "cheese ring" under heavy pressure, or, in rare instances, such as the Goshen, Connecticut, "pineapple" cheeses, by hanging them in nets, which produced the ridges. The owner

states that he had always "heard" that it was for maple sugar, but we do not know whether his informants were speaking from actual experience or observance or merely putting forth a theory. It would not seem natural to use a wooden mold for jelly, and it is doubtful if jelly in this shape would stand upright, as was evidently intended. Possibly the same objection would apply to butter, although we rather incline to give our vote to the latter. Can any of our readers identify this definitely or even advance any further suggestions?

Mr. L. L. Thwing desires it to be noted that the source from which he drew his statistics for *Carpenters, Joiners and Cabinet Makers* in our last issue was the extensive card catalogue at the Massachusetts Historical Society, *Inhabitants and Estates of Boston*, compiled by Anne Haven Thwing.

The Cooper

(*Continued from page 36, column 3*)

of leather, in the manner of an accordion. In the centre of one of these discs is set a funnel-shaped metal spout. If this spout was inserted tightly in the bung-hole of the barrel and it was found possible to press the other disc down against its mate, the necessary conclusion was that the air was escaping through some leak in the barrel.

The cooperage trade was divided into several different classes or branches. The artisans were sometimes called *cedar coopers* or *oak coopers*, according to which kind of wood they preferred as material (D). Cooperage was *tight* or *wet*, when the barrels were to contain liquids, and *slack* or *dry*, if they were intended for solid

(from Hazen's *Trades*)

substances (A, E). *White coopers* constructed tubs, pails, churns and the like (A, E), attended to the repair of staved vessels used in the home and frequently kept retail stores (G). *Butt coopers* made large barrels, puncheons and hogsheads for breweries and distilleries (F, G), and *rundlet coopers* produced small kegs for "cordials" (G).

Barrel staves were first made by machinery in this country in 1855, and complete barrels in 1865 (H), but, as late as 1874, a dictionary (E) listed a complete set of contemporary coopers' hand tools, and they have been in use to a limited extent even down to modern times, as evidenced by the fact that the writer was able, within the past few years, to procure catalogues from several different concerns which manufactured them.

AUTHORITIES

(A) *Encyclopedia Brittanica*, Vol. 7, p. 82; (B) *Industrial History of the American People*, by J. R. H. Moore, p. 42; (C) *When America Was Young*, by John T. Faris (New York, 1925) p. 7; (D) *Panorama of Professions and Trades*, by Edward Hazen (Philadelphia, 1837) p. 231; (E) *American Mechanical Dictionary*, by Edward H. Knight (New York, 1874) pp. 616, 647, 1116, 1950, 2312-3, 2495; (F) *Book of English Trades*, C. & J. Rivington (London, 1827) p. 98; (G) *The Complete Book of Trades*, by James Whittock (London, 1837) p. 160; (H) *One Hundred Years of American Commerce, 1795-1895*, by Chauncey M. Depew (New York, 1895) p. XIX; (I) *A Cooper's Shop of 1800*, by Stephen A. Wolcott, THE CHRONICLE, Vol. 1, No. 9; (M) *Ancient Carpenter's Tools*, by Henry C. Mercer (Doylestown, Pa., 1929).

Tool Kits

By EARLE T. GOODNOW

The following items appear upon a broadside price list of tools manufactured by Joseph Buck, London, England, and, while the list is undated, I have established the date as close to 1840.

The planes listed are — Smooth; Jack; Panel; Trying; Toothing; Forkstaff; Astragal and Hollow Sash; Bead; Best Side Filister with Wedge Tooth; Best Sash Filister; Match; Grooving; Hollows and Rounds; Side Rounds; Side Rabbits; Snipe Bills; Side Snipes; Hand-Rail; Ovolo Sash; Quirk Ovolo and Bead; Best Plough; Square Rabbit; Skew Rabbit; Single Reed; Reed and Fallow; Three Reed; Table; Coach Maker's Smooth; Coach Maker's Compass Smooth; Jarvis; Shaft Ovolo; and Pistol Routers.

The saws listed are — Half Rip; Hand and Panel; Brass Back; Iron Back; Table; Lock; Gentlemen's Hand; Chair Webbs; Key Hole; Wood Cutters; Turning Webbs; and Bow.

The miscellaneous tools listed are— Chisels; Firmer; Firmer Gougers; Coach Makers; Millwrights; Long Paring; Mortise; Mortise Lock; Sash and Carving. The odd items are — Plough Irons and Plough Stops; Wheeler's Buzzes; Timber Gauges; Coach Draw Bores; Spikebitts and Bell-hangers; Gimblets; Steel Busks; Bill Hooks; Striking Knives; and Parting Tools.

Roys and Wilcox of Berlin, Conn., sent out a price list of tinman's tools in 1850. The list, headed by the title "Articles included in the set", was: "1 Large Stake (or Beakhorn), 1 Blowhorn, 1 Creasing, 1 Square, 1 Candle Mould, 1 Needle-Case, 1 Set (5) Hollow Punches, 1 Set (6) Solid Punches, 1 Creasing Swedge, 1 Cullender Swedge, 1 #4 Pr. Shears, 1 Raising Hammer #1, 1 Raising Hammer #4, 2 Setting-Hammers;—The above comprise a full set—Price $58.00." In addition they listed twenty-two sizes and varieties of shears, nineteen different "Stakes" (or beakhorns), some of the names being "Conductor, Tea-Kettle, Heads, Round Head, Coppersmith's Square, Boiler and Double-Seaming"; six sizes of "Hatchet Stakes", four "Bottom Stakes", two "Double Seaming Stakes" and two "Bevel Edged Square Stakes"; Listed among "Sundry Tools" were "Square Pan Swedge", "Elbow Swedge, Planishing Hammers, Soldering-Coppers and Making Coppers". Among the machines listed were: "Folding, Grooving, Wireing, Setting Down, Large and Small Turning and Large and Small Burring". In conclusion they stated: "The Tools and Machines in the above List with every article required for Tinmen's use, are made and for sale at our Manufactory which is the only Establishment where all kinds of Tools and Machines are manufactured." If we can believe their concluding remarks, the above list should prove an interesting check list for those who collect tools from the "Tinman's" trade.

Metal Alloys

(*Continued from last issue*)

To tin copper or brass. Boil six pounds of cream of tartar, four gallons of water, and eight pounds of grain tin, or tin shavings. After the materials have boiled a sufficient time, the substance to be tinned is put therein, and the boiling continued, when the tin is precipitated in its metallic form.

To tin iron or copper vessels. Iron which is to be tinned, must be previously steeped in acid materials, such as sour whey, distiller's wash, etc.; then scoured, and dipped in melted tin, having been first rubbed over with a solution of sal ammoniac. The surface of the tin is prevented from calcining, by covering it with a coat of fat. Copper vessels must be well cleansed; and then a sufficient quantity of tin with sal ammoniac is put therein, and brought into fusion, and the copper vessel moved about. A little resin is sometimes added. The sal ammoniac prevents the copper from

(*Continued on page 39, column 1*)

Early American Industries Association

Membership

Membership lists should be amended as follows: (N) indicates new member; (S) indicates non-member subscriber; (Ch) indicates change of address; (D) indicates decease; (R) indicates resignation; (Co) indicates correction.

DISTRICT OF COLUMBIA

Washington: Shannon, Herbert T., 1505 H St. (N)

MARYLAND

Baltimore: Mencken, H. L., c/o *Evening Sun* (N)

MASSACHUSETTS

West Springfield: Herron, Mrs. Schuyler F., Storrowton (N)

Woburn: Burdett, Mrs. C. Fred, 605 Main St. (N); Burdett, Mrs. Fred H., 623 Main St. (N)

NEW YORK

New York: Alk, George, 225 Broadway (Ch)

Richmondville: Simmons, George M. (N)

Washingtonville: Dow, Melvin C., Box 143 (Ch)

The Questionnaire

Questionnaires recently received have been tabulated as follows. For key to abbreviations, see page 7.

CALIFORNIA

Hollywood: Miss Helen Gladys Percey, 5451 Marathon St., c/o Paramount Pictures, Inc. Wants photographs of all early industrial items for research department. Write only *.

INDIANA

La Porte: Lorenz F. Schumm (C), 302 C St. Collects FT, KH, SM (dental only), TC, WM. Wants LP. Write. Visit *.

NEW JERSEY

Montclair: Webster Tallmadge (C), 255 N. 18th St. Collects miscellaneous items.

NEW YORK

Richmondville: George M. Simmons (C). Collects FI, FT, HD, KH, LD, MA, TC, also wooden ware. Wants LP. Write *. Visit.

RHODE ISLAND

Providence: Mrs. H. E. Harris (C), 112 Francis St. Collects FT, KH (copper and wood). Wants LP.

Metal Alloys

(*Continued from page 38, column 3*)

scaling, and causes the tin to be fixed wherever it touches. Lately, zinc has been proposed for lining vessels instead of tin, to avoid the ill consequences which have been unjustly apprehended.

Metallic watering, or for *blanc moire*. This article, of Parisian invention, which is much employed to cover ornamental cabinet work, dressing boxes, telescopes, opera glasses, etc., etc., is prepared in the following manner:

Sulphuric acid is to be diluted with from seven to nine parts of water; then dip a sponge or rag into it, and wash with it the surface of a sheet of tin. This will speedily exhibit an appearance of crystallization, which is the moire.

This effect, however, cannot be easily produced upon every sort of sheet tin, for if the sheet has been much hardened by hammering or rolling, then the moire cannot be effected until the sheet has been heated so as to produce an incipient fusion on the surface, after which the acid will act upon it, and produce the moire. Almost any acid will do as well as the sulphuric, and it is said that the citric acid dissolved in a sufficient quantity of water, answers better than any other.

The moire may be much improved by employing the blow pipe, to form small and beautiful specks on the surface of the tin, previous to the application of the acid.

When the moire has been formed, the plate is to be varnished and polished, the varnish being tinted with any glazing colour, and thus the red, green, yellow, and pearl coloured moires are manufactured.

(*Continued in next issue*)

The Mariners' Museum, at Newport News, Va., will well repay anyone's visit. The collection of everything pertaining to the sea, — objects, pictures and literature — is a most important one, and exceptionally well arranged. The groups of whaling implements and ship-carpenter's and cooper's tools are comprehensive and practically every sort of appliance used on shipboard is shown in considerable variety. Not the least interesting are the many elaborately carved figure-heads. The majority of them are identified as having come from certain ships, but others ("ship unknown") apparently just "rolled out of the sea."

Doctoring in the "Horse and Buggy Age"

By SIGMUND EPSTEIN, M.D.

Americans have always been their own doctors, and patent medicine vendors always have had more than the proverbial "even break." Before the days of the magazine, or before the railroads delivered the widely circulated daily newspapers to the dwellers in hamlet and distant prairie village, the Medicine Showman flourished. He and his little troupe journeyed from the coast to inland towns, furnishing eagerly sought entertainment to the inhabitants, and reminding the prospective buyers of diseases of which they had little dreamt, of aches and pains that would succumb and disappear, by the simple method of taking, three times a day, "a dose of this

THE MEDICINE SHOWMAN

sovereign remedy that is good for man and beast." The late Thomas Waterman Wood has put on canvas a charming bit of small-town life; the itinerant mountebank demonstrates his "horrible example" on the front seat of his freshly painted two-horse carriage, which he has driven into the alley next to the village drugstore. This daring move gives him an early start in competing with the rural surgeon as well as with the dispenser of remedies of a herbal nature to the countryside. An interested group of listeners speaks well of the voice of the man on the box, his choice and high-sounding phrases, and his apt quotations from the books of long-forgotten medical authorities. The rarity of visitors with flowing Oriental make-up, of gorgeous colors and soft silken garments gave the little boy in the foreground his first taste of the costumes of far off "Araby." The probable *cost* of the Rhubarb and Soda Compound was a dollar a dozen twelve ounce bottles.

COMMUNICATIONS

From THE NEWARK MUSEUM, NEWARK, NEW JERSEY

"It is our intention to open early in the fall a Furniture Exhibit. In this we plan to show wood-working planes and examples of molding they produce, as well as examples of wrought iron work such as used in early architecture. We are eager to secure an early 19th century foot-power turning lathe to include in this exhibit. If such a lathe can be located, we should like to discuss with the owner the possibility of purchasing it or of borrowing it for the duration of the exhibit, which will probably last several months."

From MISS MARY EARLE GOULD:

"Here are a few observations to supplement my recent article on *Butter Prints and Molds.*

The first question asked about the butter prints was:—Why are there only one of a kind and so many different patterns?

The answer is:—Each man picked out his own pattern which was to be his trade-mark, as it were. This same idea was followed in branding cattle. If he chose an acorn, all of his butter had the acorn stamp, and anyone seeing that in a market, would know that it belonged to him. It helped him sell his goods, having his own stamp. In this way, there were many patterns for the many families that took their butter to market, and no duplicates. Possibly, in another section, quite removed, an acorn pattern would appear, but that would matter little. It would not be the identical figure and in no way would it hurt local trade. Today, these prints are scattering about, being collected and travelling far from their first homes. In that way, a few duplicate patterns come together, but it is an array of different patterns that we see. This information comes from a man in the cooperage business and is quite a valuable bit of information."

Mrs. Lura Woodside Watkins sends us the following quotation from *History of the County of Worcester* (by Peter Whitney, 1793, Isaiah Thomas, Publisher,) apropos of our recent article on *Wooden Water Pipes*:

"Northborough: There are, in this town, curious works for the conveyance of water to a great distance, the property, contrivance, and execution of Major Holloway Taylor. I know not that there are any similar works in the county, and would therefore describe them. From springs issuing out of ledges of rocks on rising lands, this gentleman has raised a small pond, and from thence brings fine water (about seventy rods, through bored logs, under ground, not only in low lands, but in some places higher lands, where the water repeatedly ascends and descends) into the back part of his house, into a large vat, near three feet in height, by a tube, from the last log, entering the bottom of the vat, which is, or may be kept constantly full, and running over; and the superfluous water is conveyed from the vat, by another tube, out on to the grass land. As the water passes under ground nigh the barn yard by a tube from a log, entering the bottom of a large trough, he has a rich supply of water for a great stock of cattle; and such is the quality of the water that it has seldom ever been known to freeze in trough or vat. As this account may be read by some not acquainted with natural philosophy, and who therefore may think it incredible that water can be made to pass over rising grounds, and through low lands, alternately, as in this case, and then rise to such a height in the house; (for these logs are carried along under ploughed fields and mowing lands;) for the sake of such it ought to be observed, that water may be conveyed anywhere, to rise exactly to the height of the fountain or pond from whence it proceeds; although it cannot be carried to a greater height in its way to the place intended. Should any persons wish to convey water in this matter, they may be informed, that yellow or pitch pine logs are much best for the purpose; they are harder and more durable; those of chestnut are too spongy and porous."

Mr. Howard G. Hubbard writes that a ninety-year-old gentleman, of Chester, Vermont, told him that he remembered making pump logs, as a young man, and that spruce was the wood most favored at that time and place.

Mr. George M. Simmons sends the following description of a display of some of his collection, as published in a bulletin of the Schoharie County Farm Bureau: "One of the most talked-about features of the 1937 Cobleskill Fair is the exhibit of old-time farm machinery and farm and home implements in charge of collector George M. Simmons, located back of the grandstand on 'Machinery Avenue'. Outside the tent are an oxcart, 125 years old; a revolving or 'flop' rake; a Manny broadcast grass seeder of 1880; two early kinds of grass mowers, one a Meadow King of 1864, the other a center-cut Eureka. On a pyramid of ox-yokes in front of the exhibit tent are eight types of yokes—a calf yoke, a yearling yoke, a single bullock yoke, a calf yoke, a general yoke showing years of wear, a rare example of slip yoke (weight 72 lbs.), a genuine old plow yoke, and last of all, a breaking yoke. Old plows include a one-handled ox plow with wooden beam and hand-made mold board, and a peg handle corn plow (140 years old). A one-wheel man-power corn planter with automatic drop has all the modern mechanical principles, but depended on man's strong arms and legs for power. Three early types of hay forks include a four-finger bucket fork, a corkscrew fork and a single harpoon. Implements for making linen thread and cloth from home-grown flax are all on exhibit — a flax-break, hetchels, swingle and two spinning wheels (double treadle), swift, reel, reeds, shuttles and spools. Other old-time home appliances include a Dutch oven, brass kettle, foot-warmer, wooden dish tubs, candle lantern, petticoat whale oil lamp, combination candle and kerosene lamp, three-legged safety cane, sap yoke and wooden carrying buckets, tin reflector oven, sauerkraut stomper, sugar bucket, sowing basket, a 'left-handed' butter ladle, a wool comb, horse fiddle, clothes stomper and sausage stuffer. Visitors mistake an old white-pine bread-dough box for a baby's cradle — a clamped lid served to keep the rats out and the bread in. A flax rope-making machine was operated by no less than four men. A case of hand-forged tools includes a wheat sickle, a spiel, shoe-peg rasp, tailor's goose, shingle frow, bark spud, ox shoes, hand-made shears, gouge adz, sith and mat-hook. Other articles include an old cheese curd mill, a splint broom (made from water beech), wooden shovel, flail, and (as auction bills say) 'other articles too numerous to mention.' Those who fail to visit this exhibit of old-time farm and home machinery and implements and hear George explain, will just fail to see the Cobleskill Fair in its completeness."

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